

AMENDMENTS TO THE CLAIMS:

Please cancel without prejudice claims 20-23, 28, 29 and 33-36 as follows.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (previously presented) A method for fabricating a micro-sensor device comprising the steps of

 fabricating on a parent substrate at least one sensor element,

 forming an interconnect layer having first and second surfaces remotely to the parent substrate so as to enclose the at least one sensor element between the first surface and the parent substrate,

 providing a plurality of electrical interconnections between the at least one sensor element and a plurality of terminations at the second surface of the interconnect layer, said terminations adapted to interface with a readout substrate ,

 providing a readout substrate having a plurality of input connections disposed on a first surface thereof, said input connections arranged so as to substantially correspond with the terminations at the second surface of the interconnect layer ,

 interfacing the plurality of terminations with the corresponding input connections to form an integrated assembly, and

 removing the parent substrate from the integrated assembly within an area corresponding substantially with the at least one sensor element.

2. (previously presented) A method according to claim 1 wherein the step of interfacing the terminations with the corresponding input connections comprises the step of forming metal connection bonds there-between.

3. (cancelled)

4. (previously presented) A method according to claim 1 wherein the readout substrate comprises an integrated circuit.

5. (previously presented) A method according to claim 1 wherein the step of fabricating the at least one sensor element comprises the step of forming the at least one sensor element on the parent substrate so as to impart a crystallographic relationship there-between.

6. (previously presented) A method according to claim 5 wherein the step of fabricating the at least one sensor element comprises an epitaxial process such that the crystallographic structure of the parent substrate is imparted to the at least one sensor element during said process.

7. (previously presented) A method according to claim 6 wherein the parent substrate exhibits a substantially single-crystal structure.

8. (previously presented) A method according to claim 1 wherein the step of fabricating the at least one sensor element comprises a heat treatment step.

9-10. (cancelled)

11. (previously presented) A method according to claim 1 wherein the step of fabricating the at least one sensor element comprises the step of depositing onto the parent substrate one of a resistive thin-film layer and a ferroelectric thin-film layer.

12-15. (cancelled)

16. (previously presented) A method according to claim 11 comprising the intermediate step of depositing a buffer layer onto the parent substrate prior to the deposition of the thin-film layer.

17. (cancelled)

18. (previously presented) A method according to claim 1 wherein the step of removing the parent substrate comprises etching the parent substrate using Tetramethyl Ammonium Hydroxide (TMAH).

19. (original) A method according to claim 18 wherein the Tetramethyl Ammonium Hydroxide etchant is doped with at least one of Silicon and Diammonium Peroxydisulphate.

20. (cancelled).

21. (cancelled).

22. (cancelled).

23. (cancelled).

24-27. (cancelled)

28. (cancelled).

29. (cancelled).

30-32. (cancelled)

33. (cancelled).

34. (cancelled).

35. (cancelled).

36. (cancelled).